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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/624,085
Filing Date: July 21, 2003
Appellant(s): KELLEY ET AL.

John C. Phillips
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/30/2008 appealing from the Office action

mailed 3/31/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,327,574	KRAMER ET AL.	12-2001
6,363,419	MARTIN, JR. ET AL.	3-2002
5,761,662	DASAN	6-1998
6,869,018	FILFIELD ET AL.	3-2005
5,855,015	SHOHAM	12-1998

Agrawal, et al. "On Integrating Catalogs" WWW10, May 1-5, 2001, Hong Kong. ACM pp. 603-612.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9a. Claims 1-2, 4, 6, 8-12, 14-17, 22-25, 27-28, 30-34, 41-53, 55-59, 61-64, 66-81, 83-85, 87-93, and 95-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (U.S. Patent 6,327,574) in view of Martin Jr. et al (U.S. Patent 6,363,419).

As to independent claim 1, Kramer teaches the following claimed subject

matter:

A communications device (a least the computing device, col. 20, l. 57) in

communication with a network (at least the Internet, fig. 6);

A virtual database accessible to the communications device (at least col. 20, ll.

62-65, and see fig. 6) over the network (at least the contents of box 802 in fig. 8

including the database), wherein the virtual database comprises: a user profile (seen

throughout Kramer), including at least one actual user characteristic received over the

network (at least the facts, col. 20, ll. 65-66, fig. 8, interpretation of user characteristic

documents 806 and stored into database 804); and a heuristic modeler (at least the

mapping and sorting, fig. 8, #810, #816) that generates at least one heuristic user

characteristic (at least the attribute vector, cols. 21-32) in accordance with the at least

one actual user characteristic, the heuristic user characteristic stored in the user profile

(at least the software attribute vector mapping uses data from the facts in the database,

fig. 8, col. 21, ll. 1-6); and

A search engine that selects content to provide to the communications device

over the network in accordance with the virtual database (fig. 1, and see "illumination

selection process" using illumination sorting starting at col. 23, l. 5).

Kramer does not expressly teach a "mobile" communications device, a monitor

that detects time and location data associated with the device, wherein the detected

time and location represent a current time and location of the device, wherein the virtual

database includes one or more items of detected time and location data, and searching

according to "one or more items of detected time and location data."

However, Martin Jr. teaches a mobile communications device, and a monitor that

detects time and location representing the current time and location of the device. Time

and location is used to provide even better targeted advertising (col. 11, ll. 48-60).

Kramer discloses targeted advertising using a virtual database about the user, and

providing advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Kramer, such that the current time and location of a

mobile device would be monitored, detected and stored, and the system would

additionally use the time and location to provide advertisements. The motivation would

have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-

60).

As to claim 2, Kramer of claim 1 further teaches wherein the network comprises

an internet (see fig. 6).

As to claim 4, Martin as applied above for claim 1 further teaches a cellular

telephone (fig. 1, col. 11, ll. 48-60).

As to claim 6, Kramer of claim 1 further teaches at least one monitor, wherein

said at least one monitor monitors the mobile communications device (e.g., user

transactions), wherein said monitor is communicatively connected to said virtual

database (see client and server side components starting from col. 12, l. 1), and

wherein at least one actual user characteristic is varied in accordance with at least one

output of said at least one monitor (see "updating a consumer model", col. 24, l. 36).

   As to claim 8, Kramer/Martin of claim 6 further teaches wherein the monitor

provides an actual characteristic comprising time of activity information (see above).

   As to claim 9, Kramer of claim 6 does not expressly disclose wherein two user

characteristics are batched prior to acceptance over the network by the database.

   However, official notice is taken that at the time the invention was made, it was

conventional to batch several files (e.g., using a file utility such as "zipping" to batch and

compress several files together).

   Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Kramer with the above teachings, such that the

information in the database is batched. The motivation would have been to save space,

as known to one of ordinary skill in the art.

   Kramer does not expressly disclose accepting the information after the batching

(interpreted as accepting database and model information about customer transactions,

behaviors, etc).

   However, official notice is again taken that at the time the invention was made, it

was conventional to accept information after batching (for example, from the Internet,

one would download and accept an already "zipped" file).

   Therefore, it would also have been obvious to further modify Kramer such that

after the batching the system will accept the data into the database. The motivation

would have been to save bandwidth on the network and increase file transfer speed.

As to claim 10, Kramer of claim 6 further teaches wherein the monitor records

activity on a network (col. 5, ll. 30-45).

As to claim 11, Kramer of claim 6 further teaches wherein the monitor comprises

a database (see fig. 6).

As to claim 12, Kramer of claim 1 further teaches wherein the user characteristic

is received from the user (col. 5, ll. 51-55).

As to claim 14, Kramer of claim 12 further teaches an access restrictor

restricting access to the user characteristic (col. 16, ll. 31-47).

As to claim 15, Kramer of claim 1 further teaches wherein the database is two

way accessible to the mobile communications device over the network (i.e., one can

read and write to the database, col. 20, ll. 57-67).

As to claim 16, the virtual database of Kramer of claim 1 has to have a

processor (for processing data), a database, a memory, and a comparator (e.g., for

Boolean Abstractor). See fig. 8 and related text.

As to claim 17, Kramer of claim 1 further teaches a real time cache (see col. 16,

ll. 48-59). The cache is real time because it is actively running, as seen throughout

Kramer.

Kramer does not expressly teach wherein the user characteristic is real time

cached in the real-time cache.

However, official notice is taken that at the time the invention was made, it was

conventional to cache data in a real time cache.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the user characteristic is cached in the real time cache. The motivation would have been to increase performance, as known to one of ordinary skill in the art.

As to claim 22, Kramer of claim 1 teaches wherein the heuristic modeler comprises at least two interrelated databases (e.g., DB, attribute vector, etc, see fig. 10).

Kramer does not expressly teach wherein the interrelated databases are relational databases.

However, official notice is taken that at the time the invention was made, it was conventional to use a relational database.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the databases are relational databases. The motivation would have been to adapt to mainstream database design.

As to claim 23, Kramer of claim 1 further teaches the following claimed subject matter:

At least one network interface to at least one network (fig. 6, see various interfaces connected to the network, e.g., #1-6);

A plurality of device interfaces to the communications device (see fig. 6 interfaces to the client, in addition to a separable database, col. 16, ll. 44-49, col. 20, ll. 62-66, which adds at least a second interface to the communications device);

A search engine interface (fig. 6, interface to the page illuminator N, also see fig. 8);

A storage database (fig. 6, database J, fig. 8, #804) comprising at least one actual user characteristic of the at least one user (facts, col. 20, ll. 65-66, fig. 8, interpretation of user characteristic documents 806 and stored into database 804) and the at least one heuristic user characteristic of the at least one user (attribute vector mapping and sorting use data from the facts in the database, fig. 8, col. 21, ll. 1-6); and

A controller (page illuminator and selection engine, fig. 6, col. 17, ll. 40-50) communicatively connected to the at least one network interface (the communication with the network is seen in col. 12, ll. 1-6), the plurality of device interfaces (the selection engine has to communicate with the client interfaces of fig. 6 as discussed above to send and receive information), the search engine interface (as discussed above), and the storage database (also as discussed above);

As to claim 24, Kramer of claim 23 further teaches wherein the controller (processor) controls information passing to the storage database, as shown by the data movement in fig. 8 and the related text.

As to claim 25, Kramer of claim 24 further teaches wherein the controller comprises at least a comparator (col. 12, ll. 20-60).

As to claim 27, Kramer of claim 1 does not expressly disclose wherein the actual user characteristic comprises a search request from the user to be performed by the search engine.

However, Kramer discloses an actual user characteristic, and a search engine (see for example the illumination selection process of Kramer). Kramer discusses that it was conventional in "banner" advertising to accept a search request from a user (col. 1, l. 62 – col. 2, l. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the actual user characteristic comprises a search request and the search engine uses the characteristic for providing a targeted advertisement. The motivation would have been to provide "banner" advertising based on a user search request with a higher probability to be of interest to the user (based on col. 2, ll. 3-15), because Kramer builds an accurate consumer model, as taught throughout Kramer. Thus, the advertising power of Kramer is increased.

As to claim 28, Kramer of claim 1 further teaches wherein the virtual database weighs the actual characteristic and the heuristic characteristic (col. 24, ll. 25-30, col. 23, ll. 31-35).

As to claim 30, Kramer of claim 1 further teaches wherein the heuristic modeler comprises a plurality of predictive rules in accordance with general behavioral patterns of persons other than the user (see col. 10, ll. 58-61, and the process for generating and updating the consumer model, found throughout Kramer).

As to claim 31, Kramer of claim 30 teaches wherein the patterns are entered into the modeler (at least indirectly). The information has to be entered into the modeler to be processed by the modeler.

Kramer does not expressly disclose directly entering.

However, official notice is taken that at the time the invention was made, it was conventional to directly enter data into a modeler for convenience, rather than, for example, having the modeler search for the data to be entered.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the data is directly entered into the modeler. The motivation would have been to facilitate processing, as known to one of ordinary skill in the art.

As to claim 32, Kramer of claim 30 further teaches wherein the general behavioral patterns are monitored by the heuristic modeler. The monitoring of the behavioral patterns have to take place to achieve "characterizing behavior in terms of the degree to which the behavior correlates with the archetypes of mom, businessman, etc", col. 10, ll. 55-65.

As to claim 33, Kramer of claim 30 further teaches wherein said virtual database instructs said search engine in accordance with a statistical probability output of the heuristic modeler, in accordance with a comparison of the at least one actual user characteristic and the predictive rules (col. 21, ll. 1-67, fully described through col. 33).

As to claim 34, Kramer of claim 33 teaches a user behavior responsive to the content provided to the user by the search engine (e.g., col. 32, l. 45 – col. 33, l. 14).

Kramer does not expressly disclose updating the statistical probability analysis (i.e. consumer modeling) with the user behavior.

However, because Kramer teaches that the consumer models reflect the characteristics of the consumer (section starting at col. 10, l. 46), and that the consumer model is continuously refined (col. 11, ll. 38-54), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the user behavior provides feedback to update the consumer database. The motivation would have been to further refine the consumer profile to gain an accurate consumer model, as taught throughout Kramer (e.g., col. 11, ll. 38-54), since useful information about the consumer's interest (e.g., consumer is interested in children's books, col. 32, ll. 66-67) is known.

As to claim 41, Kramer of claim 1 further teaches a vendor data access in communication with the virtual database (see fig. 6, the vendor data access, which at least includes the illumination server storing illuminations for access, is communicating with at least the database in client service).

As to claim 42, Kramer of claim 41 further teaches wherein the vendor data access comprises a plurality of messages (illuminations) entered by a plurality of vendors (note that the vendors are billed according to the use of illuminations in the illumination server, col. 17, ll. 61-67, thus, the illuminations are at least indirectly entered into the server by the vendor of at least the illuminations, see also fig. 3B for an example of a plurality of vendors participating in the advertising of Kramer).

As to claim 43, Kramer of claim 42 further teaches wherein the vendor data access is in communication with the search engine (see fig. 6, and fig. 8).

As to claim 44, Kramer of claim 43 further teaches wherein the vendor data access comprises a hyperlink (col. 18, ll. 38-42).

As to claim 45, Kramer of claim 43 further teaches wherein the content comprises at least two of the plurality of messages (see fig. 3B for an example of several pieces of content), wherein at least two messages are prioritized (see fig. 15, and col. 31, ll. 32-38).

As to claim 46, Kramer of claim 45 teaches prioritizing a plurality of messages corresponding to a plurality of vendors (see displaying illumination content, col. 21-32 and related figures 14-16) and fees for the messages or advertisements (billing, col. 17, ll. 62-67).

Kramer does not expressly disclose a fee paid by at least two of the vendors and prioritizing in accordance with the fee.

However, Kramer suggests that the illuminations are prioritized according to the paid fees. In other words, if the fees are not paid, the advertisements are not shown, and thus the messages are not prioritized for presentation to the user. Hence, the messages can be prioritized only when the fees are paid (i.e., in accordance with paid fees).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the messages are displayed and prioritized if the fees are paid. The motivation as known to one of ordinary skill in the art would have been to benefit the advertising system's

profits; it would be undesirable for the advertising system to provide advertising services to vendors free of charge.

As to claim 47, Kramer of claim 45 further teaches wherein the messages are prioritized according to a probability of success according to the heuristic user characteristic (col. 31, ll. 32-38).

As to claim 48, Kramer of claim 43 further teaches wherein said vendor data access further comprises at least one of the at least one actual user characteristic and the at least one heuristic user characteristic (see fig. 8 and associated explanations), and wherein said search engine selects the content in accordance with the at least one of the at least one actual user characteristic and the at least one heuristic user characteristic in said vendor data access (see the process of selecting an appropriate illumination in Kramer).

As to claim 49, Kramer of claim 48 further teaches wherein said search engine comprises a filter that identifies the content as relevant to the virtual database (see sections on illumination selection, e.g., col. 21, ll. 20-60, col. 23-24, 30-33, col. 18, l. 50 – col. 19, l. 20).

As to claim 50, Kramer of claim 49 further teaches tailoring the content to the user in according to the virtual database because the content (illuminations) are chosen according to how well they correspond to the consumer's profile model, stored in the database (col. 21, ll. 1-60, full description found in col. 22-33).

As to claim 51, Kramer of claim 49 further teaches wherein the filter comprises an internet interface (see fig. 6, connection between the illumination server, client, and

the Internet), and wherein the internet interface accesses internet information

responsive to said virtual database (this has to happen in order for the consumer to

receive the custom selected illuminations from the server), and wherein the content

(illuminations, advertisements, etc) comprises the accessed internet information (as

discussed above).

As to claim 52, Kramer of claim 1 further teaches monitoring a user response

(e.g., for the content rotator, the feedback such as clicking the rotator showing that the

user is interested) responsive to content provided to the user (illuminations selected for

the user, e.g., col. 32, l. 45 – col. 33, l. 14).

Kramer does not expressly disclose updating the virtual database (for modeling)

according to the response.

However, because Kramer teaches that the consumer models reflect the

characteristics of the consumer (section starting at col. 10, l. 46), and that the consumer

model is continuously refined (col. 11, ll. 38-54), it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Kramer with the

above teachings, such that the response updates virtual database of the consumer

model. The motivation would have been to further refine the consumer profile to gain

an accurate consumer model, as taught throughout Kramer (e.g., col. 11, ll. 38-54),

since useful information about the consumer's interest (e.g., consumer is interested in

children's books, col. 32, ll. 66-67) is known.

As to independent claim 53, Kramer teaches the following claimed subject

matter:

A communications device (computing device, col. 20, l. 57) operated by the user;

A virtual database (e.g., contents of box 802 in fig. 8 including the database) comprising at least one user profile including an actual characteristic about said user and a heuristically determined characteristic about said user (facts, col. 20, ll. 65-66, fig. 8, interpretation of user characteristic documents 806 and stored into database 804, attribute vector);

A search engine (see "illumination selection process" starting at col. 23, l. 5 with selection engine, col. 17, ll. 40-50) having access to a plurality of targeted messages and to said virtual database, wherein said search engine filters (finds best match, ranks, etc) at least one of the targeted messages that is of interest to the user according to at least one of the actual characteristics and the heuristically determined characteristic (see section on "illumination selection Process", col. 23, l. 5); and

Wherein said search engine communicates the at least one targeted message of interest to said communications device for provision to the user (fig. 8, #818, 820).

Kramer does not expressly teach a "mobile" communications device, a monitor that detects time and location data associated with the device, wherein the detected time and location represent a current time and location of the device, wherein the virtual database includes one or more items of detected time and location data, and filtering according to "one or more items of detected time and location data."

However, Martin Jr. teaches a mobile communications device, and a monitor that detects time and location representing the current time and location of the device. Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60).

Kramer discloses targeted advertising using a virtual database about the user, and providing advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, such that the current time and location of a mobile device would be monitored, detected and stored, and the system would additionally use the time and location to provide advertisements. The motivation would have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-60).

As to claim 55, Martin as applied above for claim 1 and 53 further teaches a cellular telephone (fig. 1, col. 11, ll. 48-60).

As to claim 56, Kramer of claim 53 further teaches wherein the virtual database comprises an overall model (fig. 8, col. 21-33).

As to claim 57, Kramer of claim 56 further teaches wherein the targeted message comprises a vendor advertisement (e.g., see illuminations on fig. 3B) and wherein the interest assessed according to the at least one characteristic (appeal, col. 11, ll. 10-37, col. 20, ll. 27-54, interest, col. 15, ll. 24-32) comprises an interest in purchasing from the at least one vendor advertisement (illumination). Positive responses to an advertisement (such as clicking on the advertisement) is considered to be an interest in purchasing the product from the corresponding vendor.

As to independent claim 58, Kramer teaches the following claimed subject matter:

A first database comprising actual information (facts, col. 21, ll. 1-6) entered by a user of a communication device (user's forms, col. 5, ll. 39-40), and heuristically estimating and searching with respect to the first database (see mapping).

A second database comprising monitored information of behavior by the user of the wireless device (attribute vector, col. 20, ll. 65-66, fig. 8, see interpretation of user characteristic documents 806 and stored into database 804);

At least one heuristic database comprising heuristically estimated information on user behavior (see attribute vector, Boolean Abstractor, etc. in cols. 21-32 involving a measure of confidence, i.e. likelihood, that a user possesses a certain characteristic), wherein the heuristically estimated information is estimated in accordance with the first and second database (see above);

A search engine that performs a search in accordance with the second database, and said at least one heuristic database, and that returns a result of the search to said wireless device (see "illumination selection process" starting at col. 23, l. 5, and the selection engine, col. 17, ll. 40-50, col. 21, ll. 50-60).

Kramer does not expressly disclose a wireless communication device, a monitor that detects time and location data associated with the device, wherein the detected time and location represent a current time and location of the device, wherein the second database includes one or more items of detected time and location data, and searching according to "one or more items of detected time and location data."

However, Martin Jr. teaches a wireless communications device, and a monitor that detects time and location representing the current time and location of the device.

Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60).
Kramer discloses targeted advertising using a database about the user, and providing
advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to modify Kramer, such that the current time and location of a
mobile device would be monitored, detected and stored, and the system would
additionally use the time and location to provide advertisements. The motivation would
have been to provide better targeted advertising for wireless users, as taught by Martin
Jr. (col. 11, ll. 48-60).

As to independent claim 59, Kramer teaches the following claimed subject
matter:

Building a virtual database of information regarding the user (e.g., contents of
box 802 in fig. 8 including the database, facts, col. 20, ll. 65-66, fig. 8, interpretation of
user characteristic documents 806 and stored into database 804);

Modeling at least one probabilistic behavior of the user, in accordance with the
virtual database (see for example the section on consumer models and probabilities,
col. 24, l. 36 and also the section on col. 22, l. 16, and also see "mapping and sorting,"
fig. 8, #810, attribute vector, cols. 21-32);

Searching for content targeted to the at least one modeled probabilistic behavior;
and providing the content to the communications device (see "illumination selection
process" starting at col. 23, l. 5, and the selection engine, col. 17, ll. 40-50, fig. 8, #818,
820).

Kramer does not expressly teach monitoring time and location data associated with a mobile device, wherein the detected time and location represent a current time and location of the device, wherein the virtual database includes one or more items of detected time and location data.

However, Martin Jr. teaches a mobile communications device, and a monitor that detects time and location representing the current time and location of the device. Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60). Kramer discloses targeted advertising using a virtual database about the user, and providing advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, such that the current time and location of a mobile device would be monitored, detected and stored, and the system would additionally use the time and location to provide advertisements. The motivation would have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-60).

As to claim 61, Kramer of claim 59 further teaches wherein the means for accepting a virtual database comprises means for monitoring a plurality of information input by the user (col. 5, ll. 28-45).

As to claim 62, Kramer of claim 59 further teaches wherein the building comprises monitoring transactions engaged in by the user (e.g., col. 3, ll. 10-20, col. 5, l. 27 "illumination and interpretation", col. 10, l. 25 "Profiles").

As to claim 63, Kramer of claim 62 further teaches wherein the means for monitoring comprises monitoring positive responses by the user to the provided content (see content rotator, which is activated when the user has a positive response, i.e., the user is interested in more advertisements from a merchant, col. 31, ll. 1-67).

As to claim 64, Kramer of claim 62 further teaches updating the virtual database in accordance with the monitoring (see "updating the consumer model," starting from col. 24, l. 36).

As to claim 66, Kramer of claim 59 does not expressly disclose wherein building comprises batching the information.

However, official notice is taken that at the time the invention was made, it was conventional to batch several files (e.g., using a file utility such as "zipping" to batch and compress several files together).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the information in the database is batched. The motivation would have been to save space, as known to one of ordinary skill in the art.

Kramer does not expressly disclose accepting the information after the batching (interpreted as accepting database and model information about customer transactions, behaviors, etc).

However, official notice is again taken that at the time the invention was made, it was conventional to accept information after batching (for example, from the Internet, one would download and accept an already "zipped" file).

Therefore, it would also have been obvious to further modify Kramer such that after the batching the system will accept the data into the database. The motivation would have been to save bandwidth on the network and increase file transfer speed.

As to claim 67, Kramer of claim 59 does not expressly disclose the caching the information prior to the modeling.

However, Kramer discloses caching and modeling (col. 16, ll. 32-47, col. 16, ll. 48-60, section on models starting in col. 20, l. 53).

Official notice is taken that at the time the invention was made, caching was conventional to increase the performance of computer systems.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that caching is performed before modeling. The motivation would have been to facilitate performance (as known in the art, systems using cached data can perform faster than systems without cached data), or to conform to the setup requirements of the database and models.

As to claim 68, Kramer of claim 67 does not expressly teach caching until the modeling (interpreted as caching until the modeling is complete) and then deleting (the data) upon the modeling.

However, official notice is taken that at the time the invention was made, it was conventional to remove cached data when the data is no longer needed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that the

cached data is deleted after the modeling when the cached data is no longer needed by the models. The motivation would have been to use the cache efficiently by storing necessary data and removing unnecessary data, as known to one of ordinary skill in the art.

As to claim 69, Kramer of claim 59 further teaches restricting access to the virtual database (col. 16, ll. 31-47).

As to claim 70, Kramer of claim 59 further teaches wherein the modeling comprises comparing the virtual database with general behavioral information (e.g., see pregnancy, col. 21, ll. 20-31).

As to claim 71, Kramer of claim 59 does not expressly disclose accepting a search request from the user, wherein the searching (for content) is in accordance with the search request.

However, Kramer discusses that it was conventional in "banner" advertising to accept a search request from a user (col. 1, l. 62 – col. 2, l. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that a search request can be received from the user in a "banner" advertising situation, and the consumer models (taught throughout Kramer) will be employed in combination with the search terms. The motivation would have been to provide "banner" advertising based on a user search request with a higher probability to be of interest to the user (based on col. 2, ll. 3-15), because Kramer builds an accurate consumer model, as taught throughout Kramer. Thus, the advertising power of Kramer is increased.

As to claim 72, Kramer of claim 59 further teaches comprising accepting a heuristic search request in accordance with said modeling, wherein said searching is further in accordance with the heuristic search request (e.g., col. 15, ll. 20-63, col. 18, l. 50 – col. 19, l. 18, col. 23, ll. 15-54, described fully in col. 21-33 and the relevant sections on illumination selection).

As to claim 73, Kramer of claim 72 further teaches limiting the providing of content to those having a minimum modeled probability (col. 23, ll. 15-22, col. 22, ll. 55-67).

As to claim 74, Kramer of claim 59 further teaches wherein the modeling comprises weighting actual data in the virtual database, monitored data in the virtual database, and heuristic data in the virtual database (e.g., col. 22, ll. 15-40, col. 21-32 elaborates).

As to claim 75, Kramer of claim 59 further teaches targeting the content in accordance with a vendor instruction (see selection policies, col. 15, ll. 45-62). Note that the vendor instruction has to be received in order to perform any processing on it.

As to claim 76, Kramer of claim 59 further teaches prioritizing the content in accordance with the modeling (e.g., sorting, ranking, col. 21, ll. 32-60, col. 23, ll. 54-63).

As to claims 77 and 78, Kramer of claim 59 further teaches wherein the providing comprises tailoring the content to the user's communications device in accordance with the virtual database (the illuminations are targeted, or customized, based on the user's characteristics, col. 21, ll. 32-60).

As to claim 79, Kramer of claim 59 further teaches wherein the modeling

accesses transactional habit (e.g., col. 8, II. 41-55) and personal preference data (see

section on hierarchical models, col. 20, I. 54, and col. 12, II. 17-26, col. 10, II. 50-67, col.

6, II. 8-21).

As to claim 80, Kramer of claim 59 teaches receiving feedback on the success

of the content with the user (e.g., col. 32, I. 45 – col. 33, I. 14).

Kramer does not expressly disclose updating the modeling with the feedback.

However, because Kramer teaches that the consumer models reflect the

characteristics of the consumer (section starting at col. 10, I. 46), and that the consumer

model is continuously refined (col. 11, II. 38-54), it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Kramer with the

above teachings, such that the feedback updates the consumer database. The

motivation would have been to further refine the consumer profile to gain an accurate

consumer model, as taught throughout Kramer (e.g., col. 11, II. 38-54), since useful

information about the consumer's interest (e.g., consumer is interested in children's

books, col. 32, II. 66-67) is known.

As to independent claim 81, Kramer teaches the following claimed subject

matter:

Means for accepting a virtual database of information regarding the user (e.g.,

contents of box 802 in fig. 8 including the database, facts, col. 20, II. 65-66, fig. 8,

interpretation of user characteristic documents 806 and stored into database 804);

Means for modeling at least one probabilistic behavior of the user, in accordance with the virtual database (see for example the section on consumer models, col. 24, l. 36 and also the section on col. 22, l. 16, and also see "mapping and sorting," fig. 8, #810, and the attribute vector, cols. 21-32);

Means for searching for content targeted to the at least one modeled probabilistic behavior (see "illumination selection process" starting at col. 23, l. 5, and the selection engine, col. 17, ll. 40-50); and

Means for providing the content to the communications device (fig. 8, #818, 820).

Kramer does not expressly teach a "mobile" communications device, a monitor that detects time and location data associated with the device, wherein the detected time and location represent a current time and location of the device, wherein the virtual database includes one or more items of detected time and location data, and selecting according to the "location data."

However, Martin Jr. teaches a mobile communications device, and a monitor that detects time and location representing the current time and location of the device. Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60). Kramer discloses targeted advertising using a virtual database about the user, and providing advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, such that the current time and location of a mobile device would be monitored, detected and stored, and the system would additionally use the time and location to provide advertisements. The motivation would

have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-60).

As to claim 83, Kramer of claim 81 further teaches wherein the means for accepting a virtual database comprises means for monitoring a plurality of information input by the user (col. 5, ll. 28-45).

As to claim 84, Kramer of claim 81 further teaches wherein the accepting means comprises monitoring transactions engaged in by the user (col. 3, ll. 10-20, col. 5, l. 27 "illumination and interpretation", col. 10, l. 25 "Profiles").

As to claim 85, Kramer of claim 84 further teaches wherein the means for monitoring comprises monitoring positive responses by the user to the provided content (see content rotator, which is activated when the user has a positive response, i.e., the user is interested in more advertisements from a merchant, col. 31, ll. 1-67).

As to claim 87, Kramer of claim 81 further teaches a real time cache for the information (see col. 16, ll. 48-59). The client database cache is real time because it is actively running, as seen throughout Kramer.

As to claim 88, Kramer of claim 81 further teaches wherein the modeling means comprises a database including general behavioral information (col. 6, ll. 18-21, and pertinent sections on the database storing facts).

As to claim 89, Kramer of claim 81 further teaches means for targeting the content in accordance with a vendor instruction (see selection policies, col. 15, ll. 45-62).

As to claim 90, Kramer of claim 81 further teaches prioritizing means for prioritizing the content in accordance with the modeling means (col. 21, ll. 32-62, col. 23, ll. 54-63).

As to independent claim 91, Kramer teaches the following claimed subject matter:

At least one network interface to at least one network (fig. 6, see various interfaces connected to the network, e.g., #1-6);

At least one device interface to at least one communications device (see fig. 6 interfaces to the client, in addition to a separable database, col. 16, ll. 44-49, col. 20, ll. 62-66, which adds at least a second interface to the communications device);

A searching interface (fig. 6, at least the interface to the page illuminator N, also see fig. 8);

A storage database (fig. 6, at least the database J) comprising at least one actual user characteristic of the at least one user (at least the facts, col. 20, ll. 65-66, fig. 8, interpretation of user characteristic documents 806 and stored into database 804) at least one heuristic user characteristic of the at least one user (at least the attribute vector mapping and sorting use data from the facts in the database, fig. 8, col. 21, ll. 1-6); and

A controller (at least a processor controlling the page illuminator and selection engine, fig. 6, col. 17, ll. 40-50) communicatively connected to the at least one network interface (the communication with the network is seen in col. 12, ll. 1-6), the at least one device interface (the selection engine has to communicate with the client interfaces of

fig. 6 as discussed above to send and receive information), the searching interface (as discussed above), and the storage database (also as discussed above);

Wherein said controller generates the at least one heuristic user characteristic (estimate) in accordance with the at least one actual user characteristic, and wherein said controller generates a search (selecting an appropriate content for presentation) for the searching interface in accordance with at the at least one heuristic user characteristic (see attribute vector, cols. 21-32 involving a measure of confidence, i.e. likelihood, that a user possesses a certain characteristic), the at least one actual user characteristic (attribute vector mapping and sorting uses data from the facts in the database, fig. 8, col. 21, ll. 1-6).

Kramer does not expressly teach a "mobile" communications device, wherein the database includes one or more items of detected time and location data of the mobile device, and generating the user characteristic and searching according to the time and location data.

However, Martin Jr. teaches a mobile communications device, and a monitor that detects time and location representing the current time and location of the device. Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60). Kramer discloses targeted advertising using a database about the user, and providing advertisements to the user based on user characteristics (see above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, such that the current time and location of a mobile device would be monitored, detected and stored, and the system would

additionally use the time and location to provide advertisements. The motivation would

have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-

60). Thus, the claimed subject matter would be implemented.

    As to claim 92, Kramer of claim 91 further teaches wherein the controller

(processor) controls information passing to the storage database, as shown by the data

movement in fig. 8 and the related text, from the network interface (see Internet

connected to the database in fig. 6).

    As to claim 93, Kramer of claim 92 further teaches wherein the controller

comprises a comparator (see for example pregnancy, col. 21, ll. 21-31).

    As to claim 95, Kramer of claim 91 does not expressly disclose wherein the

actual user characteristic comprises a search request from the user to be performed by

the searching interface.

    However, Kramer discloses an actual user characteristic, and a searching

interface (see for example the illumination selection process of Kramer). Kramer

discusses that it was conventional in "banner" advertising to accept a search request

from a user (col. 1, l. 62 – col. 2, l. 3).

    Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Kramer with the above teachings, such that the

actual user characteristic comprises a search request and the searching interface uses

the characteristic for providing a targeted advertisement. The motivation would have

been to provide "banner" advertising based on a user search request with a higher

probability to be of interest to the user (based on col. 2, ll. 3-15), because Kramer builds

an accurate consumer model, as taught throughout Kramer. Thus, the advertising

power of Kramer is increased.

   As to claim 96, Kramer of claim 91 further teaches wherein the heuristic user

characteristic comprises a search request (query) from the controller (processor) to be

performed by the searching interface (to find the most appropriate targeted content, col.

22, ll. 55-67).

   As to claim 97, Kramer of claim 91 further teaches wherein said controller

instructs said searching interface in accordance with a statistical probability output of

the at least one heuristic user characteristic, in accordance with a comparison to the at

least one actual user characteristic (col. 21, ll. 7-61, col. 18, l. 49 – col. 19, l. 18, col. 21-

32).

   As to claim 98, Kramer of claim 97 further teaches receiving user behavior

(feedback such as clicking the rotator showing that the user is interested) responsive to

content provided to the user by the searching interface (illuminations selected for the

user, e.g., col. 32, l. 45 – col. 33, l. 14).

   Kramer does not expressly disclose updating the statistical probability output (for

modeling) according to the behavior.

   However, because Kramer teaches that the consumer models reflect the

characteristics of the consumer (section starting at col. 10, l. 46), and that the consumer

model is continuously refined (col. 11, ll. 38-54), it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Kramer with the

above teachings, such that the behavior updates the probability output of the consumer

model. The motivation would have been to further refine the consumer profile to gain

an accurate consumer model, as taught throughout Kramer (e.g., col. 11, ll. 38-54),

since useful information about the consumer's interest (e.g., consumer is interested in

children's books, col. 32, ll. 66-67) is known.

As to claim 99, Kramer of claim 91 teaches monitoring user behavior on a

communications device using a device monitor, as discussed throughout this action.

Kramer does not expressly teach a plurality of device interfaces, each device

interface monitoring user behavior on a communications device.

However, Kramer could have several device interfaces monitoring

communications devices (e.g., of different users) because Kramer is a targeted

advertising system for consumers (see throughout Kramer).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Kramer, such that there are a plurality of

communications devices. The motivation as known to one of ordinary skill in the art

would have been to advertise to multiple users.

As to claims 100 and 101, Kramer of claim 99 teaches monitoring user behavior

for a television (col. 5, ll. 5-20, col. 9, ll. 45-65) and computer (e.g., fig. 1).

9b. **Claims 18-21 and 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (U.S. Patent 6,327,574) in view of Martin Jr. et al (U.S. Patent 6,363,419), further in view of Dasan (U.S. Patent 5,761,662).**

As to claim 18, Kramer/Martin of claim 1 teaches wherein an actual user characteristic is generated in response to a user and stored in the database (e.g., filling out forms, col. 5, II. 39-40), and a virtual database (e.g., fig. 8).

Kramer does not expressly teach the virtual database comprising an inquiry generator, and the user responding to an inquiry from the generator.

However, Dasan teaches a form inquiry (as seen in fig. 8-10). Dasan's inquiry has to be generated by an inquiry generator (e.g., web server, web page, etc) for presenting to the user. Kramer teaches that actual user characteristics are drawn from forms, as discussed above.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer/Martin, such that the virtual database can generate user inquiries such as the ones in Dasan. The motivation would have been to generate the database with detailed and generally accurate consumer information, as taught by Kramer (col. 5, II. 30-45).

As to claim 19 and 20, the combination of Kramer, Martin, and Dasan would further teach using the form data as part of the overall consumer model, because Dasan's form data would be used as part of the consumer model, as discussed above (see sections in Kramer about the consumer model).

Kramer and Dasan do not expressly teach permanently or temporarily storing the user response.

However, official notice is taken that at the time the invention was made, it was conventional to either temporarily or permanently store data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, Martin, and Dasan, such that user responses can either be permanently and temporarily stored. The motivation, as known to known of ordinary skill in the art for permanent storage would have been to allow future access to the data after the system has been turned off. The motivation for temporary storage would have been to save memory when the data is no longer needed.

As to claim 21, the combination of Kramer, Martin, and Dasan would further teach wherein the inquiry generator comprises a monitor for monitoring at least one of said at least one communications device, and wherein the response by the user comprises an activity monitored by the monitor. For example, Dasan has to have a monitor monitoring when the user clicks on the form for submission (e.g., see fig. 7-10), so that data can be sent, stored, or generated.

As to claim 35 and claim 36, Kramer/Martin of claim 23 does not expressly teach an input mode selector controllable by the user

However, Dasan teaches an input mode selector controllable by the user (see fig. 7-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer/Martin, such that an input mode selector controllable by the user is implemented for the virtual database. The motivation would have been to facilitate a user creating or editing his/her user profile for customizing the providing of content, as taught by Dasan (col. 6, ll. 54-60, col. 7, ll. 42-60, col. 4, ll. 42-50, col. 4, ll. 15-25).

As to claim 37, claim 38, and claim 39, the Kramer/Martin/Dasan combination further teaches wherein the input mode selector comprises a data input mode, a message request mode, and a search mode (see figs. 7-10 of Dasan).

As to claim 40, the combination of Kramer, Martin, and Dasan does not expressly teach wherein the automated search mode is an automated search mode generated in accordance with the heuristic modeler.

However, the combination of Kramer, Martin, and Dasan provides a search mode (see Dasan, fig. 8, #806) for a user profile. As discussed above, Kramer searches for the most appropriate advertisements (see illumination selection) based on a user profile (consumer model). As seen in Kramer, at least a part of the consumer model is heuristically generated (col. 21-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, Martin, and Dasan, such that an automatic search mode is provided, for providing targeted content according to the modeling of Kramer. The motivation would have been to facilitate providing interesting content to the user, as taught by Desan (col. 4, ll. 15-25), and throughout Kramer.

9c. Claims 26 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (U.S. Patent 6,327,574) in view of Martin Jr. et al (U.S. Patent 6,363,419), further in view of Filfield et al (U.S. Patent 6,869,018).

As to claim 26, Kramer/Martin of claim 24 does not expressly teach wherein the controller passes information to the storage database by data streaming.

However, Filfield teaches a controller passing information to a database by data streaming (col. 6, ll. 50-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer/Martin, such that data is passed to the database by data streaming. The motivation would have been to store the data as it is received, as taught by Filfield (col. 6, ll. 50-55).

As to claim 94, Kramer/Martin of claim 92 does not expressly teach wherein the controller passes information to the storage database by data streaming.

However, Filfield teaches a controller passing information to a database by data streaming (col. 6, ll. 50-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer/Martin, such that data is passed to the database by data streaming. The motivation would have been to store the data as it is received, as taught by Filfield (col. 6, ll. 50-55).

9d. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (U.S. Patent 6,327,574) in view of Martin Jr. et al (U.S. Patent 6,363,419), further in view of Agrawal et al ("On Integrating Catalogs").

As to claim 29, Kramer/Martin of claim 28 does not expressly teach weighing the actual characteristic 80% and the heuristic characteristic 20%.

However, Agrawal teaches assigning 80% of documents to a corresponding category and 20% to some other category (section 5, first paragraph), in other words, weighing a first category by 80% (80% of the documents are in this category), and weighing the other category by 20% (20% of the documents are in the other category). Agrawal describes this process as a simple 80-20 distribution.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer/Martin, such that the weights of the actual and heuristic characteristics follow an 80-20 distribution, as discussed above. The motivation would have been to facilitate a higher accuracy for predictions (see figs 7-9). Note that the models using the 80-20 distribution generally achieve higher accuracy than the 90-10 and Gaussian distributions. As taught by Agrawal, it would be a mistake if the percentage assigned to a different category were classified as an error (section 1, last 2 paragraphs).

9e. Claims 103-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (U.S. Patent 6,327,574) in view of Martin Jr. et al (U.S. Patent 6,363,419), further in view of Shoham (U.S. Patent 5,855,015).

As to independent claim 103, Kramer teaches the following claimed subject matter:

A first data bank of user characteristics, wherein said first data bank includes at least one user characteristic entered by the user (e.g., maintained by the TIC system col. 12, II. 17-27, col. 16, II. 30-60, col. 5, II. 30-60, attribute vector, col. 21-33);

A comparator communicatively connected to the first data bank (Boolean Abstractor, col. 21, II. 23-31);

A second data bank of objective characteristic communicatively connected to the comparator (e.g., pregnancy confidence of 0.75, col. 21, II. 25-30), wherein the objective characteristic is compared to the user characteristic by said comparator (e.g. determining an inequality for the user's pregnancy, col. 21, II. 25-31) for a probabilistic message target (a set of target illumination(s) selected based on the pregnancy likelihood);

An available content data bank including available content (set of illuminations, col. 21, II. 32-60);

A content filter communicatively connected to said comparator and to said available content data bank, wherein the content filter accesses the available content, and filters the available content in accordance with the probabilistic message target output from said comparator (col. 21, II. 50-60, choosing only the relevant illuminations);

Wherein the filtered available content is displayed to the user on the communications device (col. 21, II. 58-61).

Kramer does not disclose a plurality of objective characteristics.

However, in Kramer, pregnancy is merely an exemplary characteristic (col. 21, II. 25-30). Therefore, other objective characteristics can be defined.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer with the above teachings, such that a plurality of objective characteristics are defined. The motivation would have been to improve the target advertising of Kramer, since advertisements are presented to the user in Kramer based on certain user characteristics.

Kramer does not expressly disclose a wireless communication device, and determining in accordance with a time and location monitor that monitors a current location of the device.

However, Martin Jr. teaches a wireless communications device, and a monitor that detects time and location representing the current time and location of the device. Time and location is used to provide even better targeted advertising (col. 11, ll. 48-60). Kramer discloses targeted advertising using a virtual database about the user, and providing advertisements to the user (see above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer, such that the current time and location of a mobile device would be monitored, detected and stored, and the system would additionally use the time and location to provide advertisements. The motivation would have been to provide better targeted advertising, as taught by Martin Jr. (col. 11, ll. 48-60).

Kramer and Martin as applied above do not expressly teach a query engine that transmits a message to assess a level of interest of the user in the filtered available content.

However, Shoham teaches query engine that transmits a message to assess a level of interest of the user in available content (fig. 4-5, col. 7, ll. 29-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer and Martin, such that a level of interest of the user can be assessed. The motivation would have been to provide relevance feedback so that subsequent exploration will be guided toward more desirable resources, as taught by Shoham (col. 4, ll. 50-52).

As to claims 104 and 105, Kramer of claim 103 further teaches wherein the available data bank (set of illuminations) comprises network and Internet content (fig. 6, col. 18, l. 30 – col. 19, l. 25, note that an illumination server sends illuminations as internet content).

(10) Response to Argument

Appellant's invention is generally drawn to targeted advertising based on retrieving and processing a user's information in a computing environment (see e.g., Abstract).

I. Claim Rejections Under 35 USC 103(a) Based on Kramer et al. in view of Martin Jr. et al.

Claim 1 and Its Dependent Claims

Appellant argues that Kramer does not teach a "user profile" containing both an "actual user characteristic" and a "heuristic user characteristic" (and therefore, Kramer does not disclose or suggest "a user profile including at least one actual user characteristic received over the at least one network and a heuristic modeler that generates at least one heuristic user characteristic in accordance with the at least one actual user characteristic, wherein the heuristic user characteristic is stored in the user profile.") See Brief, p. 15, ll. 1-22. The examiner respectfully disagrees.

The broadest reasonable interpretation in light of the specification is applied to the claims, but limitations from the specification are not read into the claims. Kramer teaches that "a consumer profile comprises the consumer model and a database including facts pertinent to the consumer." (Examiner's emphasis, col. 10, ll. 25, 41-43). The claimed "user profile" is met by Kramer's consumer profile. The claimed "actual user characteristic" is met by Kramer's facts pertinent to the consumer (e.g., personal information, transaction histories, etc., col. 12, ll. 17-26) and the claimed "heuristic user characteristic[1]" is met by Kramer's consumer model (e.g., current characteristic values, summary data, etc., col. 12, ll. 27-32; col. 10, l. 46 – 50; "attribute vector model"; col. 22, l. 16). Thus, Kramer teaches that the claimed user profile comprises both an actual user characteristic (facts) and a heuristic user characteristic (models), as claimed.

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[1] The Merriam-Webster Online Dictionary defines "heuristic" as "involving or serving as an aid to learning, discovery, or problem-solving by experimental and especially trial-and-error methods...of or relating to exploratory problem-solving techniques that utilize self-educating techniques to improve performance...." Kramer's model data is a "heuristic user characteristic" consistent with the broadest reasonable interpretation of the term. For example, in the section starting at col. 8, l. 53, the model data relates to the likelihood that a consumer is pregnant (col. 10, ll. 50-55; col. 21, ll. 20-30). "A model means a theoretical or mathematical construct developed from facts and used to make conjectures and predictions about the consumer's current and/or future state and behavior...." (col. 10, ll. 37-41).

Appellant further argues that "Kramer et al. do not teach that the separate database and attribute vector are 'combined' to form a user profile." (Brief, p. 15, l. 15). The examiner respectfully disagrees. Kramer meets the limitation by teaching that the user profile comprises those two claimed elements as discussed above. Furthermore, the claim does not require that the actual and heuristic data both be located on a single physical data source or medium. At most, the two elements are commonly located on a claimed "virtual database" which is met as discussed below.

Appellant further argues that Kramer does not teach or suggest "a virtual database comprising the user profile that is accessible to the at least one mobile communications device over the network" (Brief, p. 15 bottom – p. 17 top). The examiner respectfully disagrees.

It should first be noted that the specification discusses a "virtual database" as a "database, relational database, database server, server farm, or the like" (¶ 18). The broadest reasonable interpretation in light of the specification has been applied to the claims. A "virtual database" is thus understood to be a database.

Therefore, Kramer's "secure client database" (fig. 6, col. 16, ll. 32-37) is a "virtual database" that comprises the user profile, as claimed (all personal information is stored as objects in the database, col. 12, ll. 8-10; the database includes facts and models, col. 12, ll. 15-34; the profile comprises facts and models, col. 10, ll. 25-45). Furthermore, Kramer's database is "accessible" to a communications device over the network (the client database is "physically resident on other devices," and only logically controlled by the consumer computer). Since the database is resident on another device, the

accessing device accesses the database through a network (col. 20, ll. 57-65). Thus, Kramer teaches a virtual database comprising the user profile that is accessible to a communications device over the network.

The secondary reference, Martin, was used in this 35 USC 103 rejection to show at least a "mobile" communications device in order to fully meet the claim limitations. See prior rejection and analysis.

For at least the above reasons, the 35 USC 103 rejection of claim 1 and its dependent claims should be sustained.

Claim 6

The examiner will first emphasize that for parent claim 1, Kramer (the primary reference), was modified by Martin (the secondary reference), in order to further support at least (1) a mobile communications device and (2) a monitor that monitors the time and location of the (mobile) device. This is seen at least in the most recent Final Office Action at p. 7, starting at l. 11. Claim 6 depends from claim 1. Thus, claim 6 refers to Kramer, as applied in claim 1.

Appellant argues that "Kramer cannot disclose a monitor that monitors a mobile communication device" (Brief, p. 17, last 4 lines), and relies on the Office Action's admission that Kramer does not teach the mobile communications device. However, the examiner recognizes that it is the combination of references that teaches or suggests the claimed subject matter.

One of the core concepts of Kramer is to monitor user transactions on the user's computer (such as transactions between a consumer and an online website) over a period of time for providing targeted advertising to the consumer's computer (e.g., Abstract, col. 2, ll. 60-67, col. 3, ll. 10-20). The claimed "monitor" is understood to be a piece of software connected to the database that performs the monitoring and produces an output to the database, which must be present in Kramer to meaningfully perform any transaction monitoring. Kramer does not explicitly teach wherein the computer is a mobile device, but Martin shows a mobile device and monitoring the time and location of the device for providing targeted advertising (col. 11, ll. 49-60). Thus, the combination teaches or suggests monitoring the transactions, time and location of a mobile communication device, and storing the monitored information in the database for providing advertising. See prior actions.

Appellant further argues that "updating a consumer model based on transactions at a store" is not equivalent to "varying an actual user characteristic in accordance with output of a monitor that monitors a mobile communications device." The examiner respectfully disagrees. Kramer/Martin monitors the customer transactions occurring during operation of the customer's device and would thus vary the stored customer characteristics according to the customer's online actions. Thus, the prior art teaches or suggests the claimed subject matter.

It is important to note that the claim language of claim 6 does not require that an "actual user characteristic" be the same characteristic as discussed with respect to claim 1 above. Specifically, claim 6 lacks the word "said" or "the" before "actual user

characteristic." Therefore, using the broadest reasonable interpretation of the claim language, the claim is met by the references.

For at least the above reasons, the 35 USC 103 rejection of claim 6 and its dependent claims should be sustained.

<u>Claim 53 and its Dependent Claims</u>

Appellant's arguments are primarily drawn to the user profile and the combination of references as discussed above and in prior actions.

For at least the above reasons, the 35 USC 103 rejection of claim 53, 58, and their dependent claims should be sustained.

<u>Claim 59 and its Dependent Claims</u>

Appellant's arguments are primarily drawn to the combination of references as discussed above and in prior actions.

Appellant further argues that Kramer does not teach modeling behavior (Brief, p. 22, line 4). The examiner respectfully disagrees. Again, one of the core concepts of Kramer is to monitor the user's transactions over a period of time to provide targeted advertising. This involves monitoring, for example, online behavior of the user. Thus, a user's interests or preferences as derived from the various transactions are understood to be a model of behavior (compiled by the computer using a model). The behavior is probabilistic (as claimed) because the user may or may not be behaving in a certain way, and the computer computes a probability (e.g., likelihood of pregnancy, see

above). Specifically, Kramer teaches, "a model means a theoretical or mathematical

construct developed from facts and used to make conjectures and predictions about the

consumer's current and/or future state and behavior…." (col. 10, ll. 37-41). The claim

does not require any specific interpretation of the word "behavior." Thus, Kramer

teaches modeling behavior as claimed.

For at least the above reasons, the 35 USC 103 rejection of claim 59, 81, and

their dependent claims should be sustained.

Claim 91 and its Dependent Claims

Appellant's arguments are primarily drawn to the combination of references as

discussed above and in prior actions.

Appellant further argues that Kramer does not disclose or suggest a "controller"

or a "processor" (Brief, p. 23, 3rd line from bottom). The examiner respectfully

disagrees. The examiner relies on features of basic computer hardware and software

architecture which must be present in order to operate in a computing system.

Specifically, if a controller and processor are meant to be hardware, Kramer must have

a controller and processor as claimed because Kramer is drawn to a computer system

performing those claimed functions. If those terms are meant to be software, then

Kramer must have corresponding software elements (i.e., processor module for

processing data, controller module for controlling data) to perform those claimed

functions. Furthermore, direct or indirect communication ("communicatively coupled")

with a network must also be present throughout the components of Kramer for proper

communication since Kramer is drawn to a client/server networked environment (see

e.g., fig. 6). Also see previous actions.

Appellant further argues that Kramer does not disclose a controller in

communication with the network. The examiner respectively disagrees for the above

reasons.

For at least the above reasons, the 35 USC 103 rejection of claim 91 and its

dependent claims should be sustained.

II. Claim Rejections under 35 USC 103(a) based on Kramer, Martin, and

Shoham

Claim 103 and its Dependent Claims

Appellant's arguments are primarily drawn to the combination of references as

discussed above and in prior actions.

For at least the above reasons, the 35 USC 103 rejection of claim 103 and its

dependent claims should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Charles E Lu/

Examiner, Art Unit 2161

Conferees:

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